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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/687,493	10/13/2000	Sung Sik Jang	45475-00028 99-44653	9392

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EXAMINER

WILLIAMS, ALEXANDER O

ART UNIT

PAPER NUMBER

2826

DATE MAILED: 03/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/687,493

Applicant(s)

JANG

Examiner

Alexander O Williams

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
- 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
- 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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Serial Number: 09/687493 Attorney's Docket #: 45475-00028

Filing Date: 10/13/00; claimed foreign priority to 10/15/99

Applicant: Jang

Examiner: Alexander Williams

Applicant's Amendment/Substitute Specification in Paper #s 14 and 15, filed 12/19/02 have been acknowledged.

The disclosure is objected to because of the following informalities: The listed application should be updated with application numbers and/or patent numbers. Also, the detailed description of the invention does not reflect the elements in the new drawings. Which is correct? The drawings and the specification should be consistent.

Appropriate correction is required.

Correction is required.

The drawings are objected to because the would be new reference numbers do not correspond to the reference numbers described in the specification, for example, [0020] line 3, "semiconductor package 10" is labeled -11— in the proposed drawings of figure 1. However, in figure 2, it is still labeled "10". Which is correct? The drawings and the specification should be consistent.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The proposed drawing correction filed on 7/16/02 has been disapproved because it is not in the form of a pen-and-ink sketch showing changes in red ink or with the changes otherwise highlighted. See MPEP § 608.02(v).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Initially, and with respect to claims 6, 13 and 20, note that a "product by process" claim is directed to the product per se, no matter how actually made, In re Hira, 190 USPQ 15 at 17 (footnote 3). See also In re Brown, 173 USPQ 685; In re Luck, 177 USPQ 523; In re Wertheim, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); In re Fitzgerald, 205 USPQ 594, 596 (CCPA); In re Marosi et al., 218 USPQ 289 (CAFC); and most recently, In re Thorpe et al., 227 USPQ 964 (CAFC, 1985) all of which make it clear that it is the final product per se which must be determined in a "product by process" claim, and not the patentability of the process, and that, as here, an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not. Note that Applicant has burden of proof in such cases as the above case law makes clear.

Claims 1 to 4, 6 to 11, 13 to 18 and 20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over by Glenn et al. (European Patent Application # 0989608 A2).

For example, Glenn et al. (figures 2 to 16) specifically figures 2 and 10 show a package semiconductor **60**, comprising: a semiconductor chip **52** having an upper surface, a circumference and a bottom surface; a plurality of input bond pads **53** and output bond pads **53** on said upper surface along said circumference electrically connected to said semiconductor chip **52**; a leadframe having a chip paddle **22**, said chip paddle being bonded to said semiconductor chip by an adhesive (inherit), said leadframe having a plurality of tie bars **23**, said plurality of tie bars **28** each having a side surface and a bottom surface, said plurality of tie bars externally extending from

said chip paddle **22**, said leadframe having a plurality of dam bars **29**; a plurality of leads **31** connected to said leadframe; a plurality of wires **54** electrically connected to said plurality of leads and said semiconductor chips; encapsulation material encapsulating said semiconductor chip, said plurality of conductive wires, said chip paddle, and said plurality of internal leads **63** to form a package body **51**; wherein said chip paddle has a plurality of through holes in said half etched section of said chip paddle for increasing the bonding strength of said encapsulating material in said package body. Glenn et al. fail to explicitly show the tie bars being connected to said corners of said chip paddle. However, Glenn et al. does disclose tie bars **28** connected to the chip paddle **23**.

Therefore, it would have been obvious to one of ordinary skill in the art to use the teaching Glenn et al.'s tie bars for the purpose of providing support to the leadframe.

As to the grounds of rejection under section 103, see MPEP § 2113.

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Claims 1 to 4, 6 to 11, 13 to 18 and 20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over by Glenn et al. (Japan Patent # 2000-150765).

For example, Glenn et al. (figures 2 to 16) specifically figures 2 and 10 show a package semiconductor **60**, comprising: a semiconductor chip **52** having an upper surface, a circumference and a bottom surface; a plurality of input bond pads **53** and output bond pads **53** on said upper surface along said circumference electrically connected to said semiconductor chip **52**; a leadframe having a chip paddle **22**, said chip paddle being bonded to said semiconductor chip by an adhesive (inherit), said leadframe having a plurality of tie bars **23**, said plurality of tie bars **28** each having a side surface and a bottom surface, said plurality of tie bars externally extending from said chip paddle **22**, said leadframe having a plurality of dam bars **29**; a plurality of leads **31** connected to said leadframe; a plurality of wires **54** electrically connected to said plurality of leads and said semiconductor chips; encapsulation material encapsulating said semiconductor chip, said plurality of conductive wires, said chip paddle, and said plurality of internal leads **63** to form a package body **51**; wherein said

chip paddle has a plurality of through holes in said half etched section of said chip paddle for increasing the bonding strength of said encapsulating material in said package body. Glenn et al. fail to explicitly show the tie bars being connected to said corners of said chip paddle. However, Glenn et al. does disclose tie bars 28 connected to the chip paddle 23.

Therefore, it would have been obvious to one of ordinary skill in the art to use the teaching Glenn et al.'s tie bars for the purpose of providing support to the leadframe.

As to the grounds of rejection under section 103, see MPEP § 2113.

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Claims 1 to 20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over by Lerner et al. (U.S. Patent # 5,381,042).

For example, Lerner et al. (figures 1A to 8) specifically figure 6 show a package semiconductor, comprising: a semiconductor chip **520** having an upper surface, a circumference and a bottom surface; a plurality of input bond pads (**inherit**) and output bond pads (**inherit**) on said upper surface along said circumference electrically connected to said semiconductor chip; a leadframe having a chip paddle **400**, said chip paddle being bonded to said semiconductor chip by an adhesive (**inherit**), said leadframe having a plurality of tie bars **521a**, said plurality of tie bars each having a side surface and a bottom surface, said plurality of tie bars externally extending from said chip paddle, said leadframe having a plurality of dam bars (**inherit, shown as 221 in figure 2**); a plurality of leads (**shown as 221a in figure 2**) connected to said leadframe; a plurality of wires **523** electrically connected to said plurality of leads and said semiconductor chips; encapsulation material encapsulating said semiconductor chip, said plurality of conductive wires, said chip paddle, and said plurality of internal leads to form a package body **601**; wherein said chip paddle has a plurality of through holes in said half etched section of said chip paddle for increasing the bonding strength of said encapsulating material in said package body. Lerner et al. fail to explicitly show the tie

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bars being connected to said corners of said chip paddle. However, Lerner et al. does disclose tie bars 221 connected to the chip paddle 222b in figure 2.

Therefore, it would have been obvious to one of ordinary skill in the art to use the teaching Lerner et al.'s tie bars for the purpose of providing support to the leadframe.

As to the grounds of rejection under section 103, see MPEP § 2113.

## Response

Applicant's arguments filed 12/19/02 have been fully considered, but are moot in view of the new grounds of rejections detailed above.

The listed references are cited as of interest to this application, but not applied at this time.

Field of Search	Date
U.S. Class and subclass: 257/666,675,676,684,692,693,696,698,706,707,711- 713,717,720,734,730,787,796	1/12/02 10/12/02 3/3/03
Other Documentation: foreign patents and literature in 257//666,675,676,684,692,693,696,698,706,707,711- 713,717,720,734,730,787,796	1/12/02 10/12/02 3/3/03
Electronic data base(s): U.S. Patents EAST	1/12/02 10/12/02 3/3/03

***Papers related to this application may be submitted to Technology Center 2800 by facsimile transmission. Papers should be faxed to Technology Center 2800 via the Technology Center 2800 Fax center located in Crystal Plaza 4-5B15. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The Technology Center 2800 Fax Center number is (703) 308-7722 or 24. Only Papers related to Technology Center 2800 APPLICATIONS SHOULD BE FAXED to the GROUP 2800 FAX CENTER.***

Any inquiry concerning this communication or any earlier communication from the examiner should be directed to ***Examiner Alexander Williams*** whose telephone number is (703) 308-4863.

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Any inquiry of a general nature or relating to the status of this application should be directed to the **Technology Center 2800 receptionist** whose telephone number is (703) 308-0956.

3/3/03

A handwritten signature in black ink, appearing to read 'Alexander O. Williams', written in a cursive style.

Primary Examiner  
Alexander O. Williams